

IN THE CLAIMS

Claim 1. (Currently Amended) A method for selectively reading counter information in a network device, the method comprising the steps of:

selectively setting ripeness indicators in an array of ripeness indicators, each of the ripeness indicators in the array including one or more bits and being associated with one or more ~~of the~~ counters and, when set, indicating that a value of at least one of the associated one or more counters has exceeded a threshold value, each of the counters containing information associated with statistics of traffic being handled by the network device;

deciding which counters to read and which counters to not read by reading the array of ripeness indicators to determine a subset of the counters that have fullness levels above ~~their~~ the subset of counters' respective thresholds; and

~~after reading the array of ripeness indicators, reading only the subset of counters determined from reading the array of ripeness indicators; and~~

iterating the steps of selectively setting ripeness indicators in the array of ripeness indicators, reading the array of ripeness indicators, and reading only the subset of counters determined from reading the array of ripeness indicators, wherein only counters identified as having fullness levels above respective thresholds by the ripeness indicators are harvested by the network device and counters not identified as having fullness levels above respective thresholds are skipped and not harvested by the network device.

Claim 2. (Previously Presented) The method of claim 1, further comprising resetting the ripeness indicators after reading the associated counters.

Claim 3-4. (Canceled)

Claim 5. (Previously Presented) The method of claim 1, further comprising dynamically adjusting the thresholds.

Claim 6-7. (Canceled)

Claim 8. (Currently Amended) A network device, comprising:

a forwarding engine configured to process data traffic received by the network device;
a plurality of counters configured to monitor aspects of data traffic received by the network device;

an array of ripeness indicators, each of the ripeness indicators in the array including one or more bits and being associated with one or more of the counters, each of the ripeness indicators being indicative of a fullness level of the one or more counters with which the ripeness indicator is associated and indicating that the fullness level of the one or more counters has exceeded ~~it's~~ a respective threshold of that counter; and

control logic configured to decide which counters to read and which counters to not read by reading the array of ripeness indicators to determine a subset of the counters that have fullness levels above ~~their~~ the subset of counters' respective thresholds, the control logic being further configured to harvest information only from counters in the subset of counters determined from reading the array of ripeness indicators; and

wherein the control logic is further configured to iteratively read the array of ripeness indicators and harvest only the subset of counters determined from reading the array of ripeness indicators, to cause only counters identified by the ripeness indicators as having fullness levels above respective thresholds to be harvested by the network device and to cause counters not identified as having fullness levels above respective thresholds to be skipped and not harvested by the network device.

Claim 9. (Canceled)

Claim 10. (Previously Presented) The network device of claim 8, wherein every bit in the array of ripeness indicators represents at least one of said counters.

Claim 11. (Canceled)

Claim 12. (Currently Amended) A network device, comprising:

- a forwarding engine configured to process data traffic received by the network device;
- a plurality of counters configured to monitor aspects of data traffic received by the network device;

- an array of bits implementing a plurality of ripeness indicators, each of the ripeness indicators being associated with one or more of the counters, each of the ripeness indicators being indicative of a fullness level of the one or more counters with which it is associated and indicating that the fullness level of the one or more counters has exceeded a threshold; and

- control logic configured to iteratively read the array of ripeness indicators to decide which counters to read and which counters to not read by determining ~~determine~~ a subset of the counters that have fullness levels above ~~their~~ the subset of counters' respective thresholds, the control logic being further configured to read, after reading the array of ripeness indicators, only the subset of counters that were determined to have fullness levels above ~~their~~ the subset of counters' respective thresholds wherein only counters identified by the ripeness indicators as having fullness levels above respective thresholds are harvested by the network device and counters not identified as having fullness levels above respective thresholds are skipped and not harvested by the network device;

- wherein the forwarding engine maintains the counters.

Claim 13. (Original) The network device of claim 8, wherein the control logic is part of the forwarding engine.

Claim 14. (Original) The network device of claim 8, further comprising a switch fabric connected to the forwarding engine.

Claim 15. (Previously Presented) The network device of claim 8, further comprising a statistics coprocessor configured to interface with said counters and said control logic to enable statistics to be generated from values harvested from said counters.

Claim 16. (Canceled)